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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,104	01/07/2002	Robert Christopher Dixon	AUS9-2001-0814-US1	6894

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IBM CORP. (AVE)  
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EXAMINER

CHEN, TSE W

ART UNIT	PAPER NUMBER
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2116

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/042,104	DIXON ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tse Chen	2116	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 3-9, 12-18 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-9, 12-18 and 21 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. It is hereby acknowledged that the following papers have been received and placed of record in the file: Amendment dated February 18, 2005.
2. Claims 3-9, 12-18, and 21 are presented for examination. Applicant has canceled claims 1-2, 10-11, and 19-20.

### *Claim Objections*

3. Claims 3, 5, 7, 9, 12, 14, 16, 18 and 21 are objected to because of the following informalities:
  - As per claim 3, the first limitation should be “performing, in the electronic device, first and second operations responsive to a timing clock having a primary frequency  $f$ , wherein the electronic device is capable of performing the operations within X and Y cycles of the clock, respectively, and wherein X cycles of the clock correspond to a time interval T1 with the clock operating at the primary frequency  $f$ , and, accordingly, the device is capable of performing X/Y instances of the second operation within time interval T1 with the clock operating at the primary frequency  $f$ ”; the third limitation should be “masking a certain effect of the at least one extra cycle of the clock for the second operation, so that instances of the second operation during the interval T1 remain no greater in number than X/Y”; the fourth limitation should be “wherein a first clock signal has the primary frequency  $f$  and a second clock signal has a frequency greater than the primary frequency  $f$ , and wherein generating the at least one extra cycle of the clock comprises selecting, during some of the time T1, the second clock signal for output as the timing clock”; and the fifth limitation should be “wherein instances of the second

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operation are initiated by asserting an operation-initiating control signal in conjunction with asserting the timing clock, and wherein masking the effect of the at least one extra cycle of the clock comprises altering timing of the control signal, so that assertion of the control signal occurs during a different time interval than does assertion of the at least one extra cycle of the clock".

- As per claims 5, 7, 14 and 16, "the at least one extra cycle" should be "the at least one extra cycle of the clock".
- As per claims 9 and 18, "the extra cycle" should be "the at least one extra cycle of the clock".
- As per claims 12 and 21, "f" and "(the) frequency f" should be "the primary frequency f"; "the at least one extra cycle", "the extra clock cycle", and "the least one extra cycle" should be "the at least one extra cycle of the clock".

4. Appropriate correction is required.

#### ***Examiner's Amendment***

5. An examiner's amendment of record appears below. Should changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

6. The application has been amended as follows:

7. Pursuant to MPEP 606.01, the title has been changed to read:

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8. -- METHOD, APPARATUS, AND COMPUTER PROGRAM PRODUCT FOR  
PACING CLOCKED OPERATIONS VIA THE GENERATION AND MASKING OF AN  
EXTRA CYCLE OF THE CLOCK --

*Allowable Subject Matter*

9. Claims 3-9, 12-18, and 21 are allowed.

10. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

11. The following is an examiner's statement of reasons for allowance: the claims are allowable because none of the references cited, either alone or in combination discloses or renders obvious a method and means thereof, comprising: "performing, in the electronic device, first and second operations responsive to a timing clock having a primary frequency  $f$ , wherein the electronic device is capable of performing the operations within  $X$  and  $Y$  cycles of the clock, respectively, and wherein  $X$  cycles of the clock correspond to a time interval  $T1$  with the clock operating at the primary frequency  $f$ , and, accordingly, the device is capable of performing  $X/Y$  instances of the second operation within time interval  $T1$  with the clock operating at the primary frequency  $f$ ; generating, during the time interval  $T1$ , at least one extra cycle of the clock, to selectively reduce performance time for the first operation; masking a certain effect of the at least one extra cycle of the clock for the second operation, so that instances of the second operation during the interval  $T1$  remain no greater in number than  $X/Y$ ; wherein a first clock signal has the primary frequency  $f$  and a second clock signal has a frequency greater than the primary frequency  $f$ , and wherein generating the at least one extra cycle of the clock comprises

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selecting, during some of the time T1, the second clock signal for output as the timing clock; wherein instances of the second operation are initiated by asserting an operation-initiating control signal in conjunction with asserting the timing clock, and wherein masking the effect of the at least one extra cycle of the clock comprises altering timing of the control signal, so that assertion of the control signal occurs during a different time interval than does assertion of the at least one extra cycle of the clock”.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

### ***Conclusion***

12. This application is in condition for allowance except for the following formal matters:

Claims 3, 5, 7, 9, 12, 14, 16, 18 and 21 are required to be amended to overcome the claim objections as discussed above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tse Chen whose telephone number is (571) 272-3672. The examiner can normally be reached on Monday - Friday 9AM - 5PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tse Chen  
March 23, 2005

  
**LYNNE H. BROWNE**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**